

**Exercise 1** Let's discuss some of the properties of the tangent function.

- (a) Recall that the sine function is odd and the cosine function is even. Using the fact that  $\tan(x) = \frac{\sin(x)}{\cos(x)}$ , we can deduce that tangent is

**Multiple Choice:**

- (i) odd. ✓
- (ii) even.
- (iii) neither odd nor even.

- (b) Recall that the tangent function has period  $\pi$ . Using the fact that  $\tan\left(-\frac{\pi}{3}\right) = -\sqrt{3}$ , answer the following questions.

What is  $\tan\left(\frac{2\pi}{3}\right)$ ?

**Multiple Choice:**

- (i)  $\sqrt{3}$
- (ii)  $-\sqrt{3}$  ✓
- (iii) 3
- (iv) -3
- (v) -1.72

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**Multiple Choice:**

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